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Web-Based Supplementary Materials and New Literacies Learning

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Introduction
Textbooks are the main part of curriculum, the basis of teaching and instruction. Tanner (1996) holds that textbooks not only determine the content of instruction, but also the teaching procedures (p. 114), because they are the dominant resources in classrooms. Curriculum guides, lesson plans, teaching objects, and schoolwork and homework assignments are derived from textbooks, because they are the fundamental materials containing content knowledge and subject matter. With the development of technology and deepness of educational reform, traditional textbooks cannot meet the diverse needs of students in an era of multimodality and multiple literacies. Web-based supplements in textbooks have displayed unique advantages, which enrich curriculum resources and also facilitate learning outcomes to some degree. The content analysis research presented here attempts to address two questions by analyzing the content of one textbook “Literacies” (Kalantzis, & Cope, 2012). These research questions are What does the website at literacies.com function in this book? In what ways the website facilitates learners’ learning effectiveness and efficiency?

Literature Review
The textbook, as a pedagogical instrument, plays a vital role in teaching and learning. However, as it cannot keep pace with advanced technology, a print-based textbook exposes weaknesses: such as outdated photographs, the asymmetrical information of illustrations, insufficient
knowledge, too heavy to carry, dull colors, and the absence of interaction, and so forth (Foshay, 1990; Child & Schwab, 2005). Such weaknesses discourage students’ interest in learning and can worsen their academic achievement. The birth of web-based supplementary materials has revolutionized teaching methods and learning styles. Web-based supplementary materials provide learners with unlimited information, more opportunities to participate in learning activities, and more control over the learning process (Boynton, & Imfeld, 2004; Child, Pearson, & Amundson, 2007; Chizmar, & Walbert, 1999; Sellnow, Child, & Ahlfeldt, 2005; Rackaway, 2012; Rivero, 2013). These supplementary materials include “links to other Web sites, chat rooms on pertinent topics, quizzes and guiding questions for each chapter, and sound and video animation of the book” (Wright, 2002, p. 29). Including websites within textbooks offers online learning environments in which students can interact with book content, and also with their teachers and peers. Such inclusion also provides students with study management tools, multiple activities, all kinds of assignments, assessment tools, and other learning options. Web-based supplementary materials have made it possible for students to improve learning outcomes, because they can “immerse themselves in images with interactive captions, rotate 3D objects, and quiz themselves with chapter reviews. With a finger swipe, they can flip through their ‘books’ and highlight text, take notes, run a search, locate definitions” (Rivero, 2013, para. 2).

Research also shows that web-based supplementary materials are not as useful as expected, as there may be no easy access to the internet, a lot of irrelevant readings, outdated information, require time consuming and tedious reading, and so on (Chizmar, & Walbert, 1999; Wright, 2002; Boynton, & Imfeld, 2004; Sellnow, Child, & Ahlfeldt, 2005). Even though including web links within textbooks has weaknesses, advantages also exist. My content analysis attempts to analyze four literacy textbooks used for doctoral students majoring in new literacies. The research questions are the following. What are the web-based supplementary materials in a new literacies class? In what ways do those web-based supplementary materials facilitate doctoral students’ learning of new literacies?

Method

The four books used in the new literacies class as textbooks included Cope and Kalantzis’s (2000) Multiliteracies: Literacy learning and the design of social futures, Kalantzis, & Cope’s (2012) Literacies, Kress’s (2003) Literacy in the new media age, and Pahl and Rowsell’s (2006) Travel notes from the new literacy studies: Instances of practice. These books discuss the definition of new literacies, multimodality, multiliteracies, approaches to literacies, literacy standards and assessments, and literacy pedagogies. Travel notes from the new literacy studies: Instances of practice is composed of four parts and eleven chapters. There are four parts and 15 chapters in Literacies. Literacy in the new media age consists of 10 chapters. Multiliteracies: Literacy learning and the design of social futures has five parts and 16 chapters. All the books have illustrations, charts, and graphics, which are helpful in making meaning of the texts and contexts. The marriage of text with illustrations embodies multiple modes of meaning making and designing by adding life to banal content.

There are references or notes in the end of each chapter in both Literacies (Kalantzis, & Cope, 2012) and Travel notes from the new literacies studies (Pahl, & Rowsell, 2006), which offer an easy way for learners to refer to different articles or books related to the chapters. But in the other two books, there are only references or a bibliography at the end of the book.
I am going to focus on one book, *Literacies*, because this book is recently published and more technologically advanced. There is an “Overview” at the beginning of each chapter and a “Summary” at the end of each chapter. The book also has “Knowledge processes” and “Keywords” after each “Summary”. The other three books do not have any additional parts like those in *Literacies* (Kalantzis, & Cope, 2012). More importantly, *Literacies* includes web-based supplementary materials within the book, which says:

> [t]he guiding narrative in this book is supplemented by a website at literacies.com. Frequent links are made to this website in this book. This site includes supplementary readings, a glossary of terms used in this book, and lists of additional readings. (p. 17)

So, this current study aims to investigate what those supplementary materials are. I ask, “In what ways do the supplementary materials facilitate new literacy doctoral students in building theoretical knowledge in order to guide their research?

**Data Collection and Analysis**

This research analyzes the book *Literacies* (Kalantzis, & Cope, 2012) with web-based supplementary materials at the website literacies.com, including supplementary readings (called supporting material at the web site), a glossary of terms (called key words at the site), and additional readings. In each chapter of this book, relevant web links are listed under related content.

In chapter one, there are 26 web links related to languages, reading and writing in different modes and representations, and other literacy skills, which are divided into three categories: First languages, Starting to write, and New media and new literacies. There are 21 web links associated to literacies purposes in chapter 2, which are composed of three categories: literacies for work, literacies for citizenship, and literacies for contemporary community life. Chapter three presents 38 web links, which are divided into four dimensions, including “The Contents of Literacy Knowledge—Formal Rules, Correct Usage, Reading for One Meaning, and Appreciating the Literary Canon”, “The Organisation of Literacy Curriculum—Following the Syllabus, the Textbook and the Teacher”, “Learners Doing Literacy—Copying, Repetition, Memorisation and Applying Rules”, and “The Social Relationships of Literacy Learning—Authority in Language Knowledge”. These four dimensions explain the history of didactic literacy pedagogy and its roles in literacy development.

Chapter four offers 19 web links that are categorized as three dimensions: “The Contents of Literacy Knowledge—Authentic Meanings”, “The Organisation of Literacy Curriculum—Process Pedagogy and Natural Language Growth”, and “Learners Doing Literacy—Active Learning and Experiential Immersion”. These web links provide learners with additional resources to help understand the definition, strengths, and weaknesses of authentic literacy pedagogy. 11 web links are included into chapter 5, which consist of four dimensions: “The Contents of Literacy Knowledge—Learning the Genres of School Success and Social Power”, “The Organisation of Literacy Curriculum—Reading Genre Models and Writing within Generic Frameworks”, “Learners Doing Literacy—Presentation of Genre Scaffolds and Independent Construction in these Scaffolds”, and “The Social Relationships of Literacy Learning—Learning
Powerful Text Forms for Educational Success and Social Access”. These dimensions depict the focus and aims of functional approach to literacies.

Chapter 6 provides 25 web links, which are divided into 4 dimensions: “The Contents of Literacy Knowledge—Learning a Critical Thinking, about Social Differences, and through Popular and New Media Cultures”, “The Organisation of Literacy Curriculum—A Focus on Voice and Agency”, “Learners Doing Literacy—Engagement with Real Word Issues and Active Citizenship”, and “The Social Relationships of Literacy Learning—Literacies as a Tool for Taking Control of One’s Life”. These dimensions stress the emphasis of critical pedagogy on literacy development, which focus on critical thinking and plural cultures.

Chapter 7 includes 12 web links, which discuss “Meaning-Making in Representation and Communication”, “Meaning Making as a Design Process” and “Multimodality” in literacy development. 11 web links in chapter 8 describe making written meanings in details. Chapter 9 includes 13 web links, which vividly account for making visual meanings, including “Visual Representation and Communication”, “Perceptual and Mental Images”, “The Visual Design Process”, and “Paths to Synaesthesia: Making Connections between Visual and Other Modes of Meaning”. Chapter 10 uses 12 web links to explicate how to employ different modes to make meaning, such as capitalizing on spatial, tactile and gestural modes to design meaning and voice various ideas. Chapter 11 adds 6 web links to help readers understand “Making Audio and Oral Meanings”. Chapter 12 uses 7 web links to further detail literacies that are used as “a basis for communicating knowledge, and also for learners to represent knowledge to themselves in their thinking” (Kalantzis, & Cope, 2012). Chapter 13, 14, and 15 offer 5, 9, and 6 web links respectively. In these links, literacy pedagogies, learners’ differences, and literacies standards and assessments are discussed. (Details are listed in Table 1).

Table 1

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<tr>
<th>The name of chapter</th>
<th>The number of Web links</th>
<th>The content of web links</th>
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<tbody>
<tr>
<td>Chapter 1</td>
<td>26</td>
<td>1. First Languages</td>
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<td>2. Starting to Write</td>
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<td>3. New Media and New Literacies</td>
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<td>Chapter 2</td>
<td>21</td>
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<td>2. Literacies for Citizenship</td>
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<td>3. Literacies for Contemporary Life</td>
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<td>Chapter 4</td>
<td>19</td>
<td>1. The Contents of Literacy Knowledge—Authentic Meanings</td>
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<td>2. The Organisation of Literacy Curriculum—Process Pedagogy</td>
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### Chapter 5
1. The Contents of Literacy Knowledge
2. The Organisation of Literacy Curriculum
3. Learners Doing Literacy
4. The Social Relationships of Literacy Learning

### Chapter 6
1. The Contents of Literacy Knowledge
2. The Organisation of Literacy Curriculum
3. Learners Doing Literacy
4. The Social Relationships of Literacy Learning

### Chapter 7
1. Meaning-Making in Representation and Communication
2. Meaning Making as a Design Process
3. “Multimodality” in literacy development

### Chapter 8
1. Working at Reading
2. Connecting the Sounds of Speech with the Visuals of Writing
3. Working at Writing
4. A Traditional Grammar of English
5. Transformational-Generative Grammar
6. Systemic-Functional Grammar

### Chapter 9
1. Visual Representation and Communication
2. Perceptual and Mental Images
3. The Visual Design Process
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<tr>
<th>Chapter</th>
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| Chapter 10 | 12   | 1. Spatial Meanings  
2. Tactile Meanings  
3. Gestural Meanings  
4. Paths to Synaesthesia: Making Connections between Spatial, Tactile, Gestural and Other Modes of Meanings |
| Chapter 11 | 6    | 1. Oral Meanings  
2. Paths to Synaesthesia: Crossovers between Oral and Written Meanings                           |
| Chapter 12 | 7    | 1. Literacies for Learning                                                                        |
| Chapter 13 | 5    | 1. Things You Do To Know  
2. Crosswalks: Connecting with Existing Theories and Practices                                       |
| Chapter 14 | 9    | 1. The Effects of Difference in Literacies Learning  
2. From Group Demographics to the Complexities to Learner Differences  
3. Age Differences and Literacies Learning  
4. Different Language Backgrounds and Literacies Learning                                             |
| Chapter 15 | 6    | 1. Literacies Standards  
2. Literacies Assessment                                                                              |

These web links within *Literacies* (Kalantzis, & Cope, 2012) help doctoral students understand unfamiliar and abstract content presented in the book. On page 385 of *Literacies*, for example, the authors discuss the influences of lifeworld on literacy learning, who state that “[t]he lifeworld is what has shaped them. It is what they unreflectively like and dislike. It is who they are and an identity they carry with them in all other contexts”, which talks about discourse and identity. To help readers understand the content, a web link “See literacies.com Gee on Social Languages” is
listed on this page (p. 385) to invite learners to go to the site to find out more about how lifeworld shapes one’s identities. By reading Gee’s story selected from his book *An introduction to discourse analysis: Theory and method* (Gee, 1999), the complicated concept of discourse and identities becomes intelligible. These web links also provide doctoral students with literacy knowledge, pedagogical theories, and additional relevant information, which may enrich their knowledge, broaden their horizons, and also develop their creative and critical thinking.

The link “Kress on Writing and Image Culture” on the following website is a case in point. [http://newlearningonline.com/literacies/chapter-1/kress-on-writing-and-image-culture](http://newlearningonline.com/literacies/chapter-1/kress-on-writing-and-image-culture). Kress (2003) holds that the marriage of the screen with writing might be the predominant way to make and design meanings in the new era of technology. In this regard, he suggests literacy needs to be redefined to take into account the intricate relationships between texts and the sociocultural, economical, historical, and technological contexts. With the development of technology, two moves present the profound influences of societal advancement on literacies: the move from writing to image, and the move from pint-based book to the screen (p. 140-141). Drawing on Kress’ interpretation of writing and image culture, a new definition of literacy or multiliteracies becomes clearer than before. These web links in the book offer students more opportunities to collect, process, and produce information and knowledge. In addition, these links also function as a valuable platform for students to do research. The heated debate over standardized testing and how to evaluate students’ literacy ability has motivated doctoral students to look for answers and solutions by employing plural modes of learning. The link “Kohn on Standardised Testing” presents one example how Kohn views standardized testing, which might spur different opinions on the same topic, because everybody has different ideas based on their different educational and cultural backgrounds. The link might pique doctoral students’ research interest.

Except for supporting readings on the website [http://newlearningonline.com/literacies/](http://newlearningonline.com/literacies/), there are “Further readings” at the end of “Supporting readings” and “Key words” on the home page of literacies.com. The further readings are almost the same as “Notes” in each chapter of the book, which are the references. Students do not have direct access to the readings listed on the website. As for the “Key words”, which are presented in the book, there is no need to display them again at the website as it seems to be redundant.

**Findings and Conclusion**

Web-based supplementary materials have been found to facilitate learning in a number of ways, such as enriching knowledge, assisting in clarifying unfamiliar theories and concepts, encouraging students’ research interest and passion, and developing creative and critical thinking (Burbules, & Berk, 1999; Giroux, 1992). However, these web-based supplementary materials are not as useful as expected. The materials may not be current and updated. This book *Literacies* (Kalantzis, & Cope, 2012) was published in 2012, but some articles at the website are old. Even though some theories presented are classical, they do not fit within new literacies. It is necessary to select updated knowledge and information. In addition, for the same topic, the materials lack plurality. For example, two studies on “Different Language Backgrounds and Literacies Learning” excerpted from Cummins (2000), seem to be homogeneous, although Cummins is an authority of bilingual education. If the website chose Kern or Gee’s work, students would get heterogeneous ideas. Even though these two scholars’ research fields are overlapping, each of them has their unique interpretations of and perspectives on the same topic. Gee’s focus is on
discourse analysis and digital literacy, but Kern’s emphasis is on second language literacy. If we just concentrate on one scholar, the information or knowledge we get might be limited. Furthermore, some materials are not research-based, like the link “The NAEP Rubric”, which might not be useful for doctoral students to do research. More importantly, the website literacies.com does not have an interactive function. There is no room for doctoral students and their professors to discuss questions and exchange ideas. If a discussion forum was built, students might upload their interpretation of the readings and voice their different perspectives on literacies, which could be more helpful for fostering creative and critical thinking. Some important resources listed on the web site are not available and accessible. Future research could involve interviewing some doctoral students regarding their perceptions of including web links into books and how they evaluate the function of those links. To get more information, I could also interview professors about why they choose books with web links. How do they perceive the links in books? In what ways might the links improve teaching and learning?

References


Rivero, V. (2013). Digital textbooks: Show me the future!. *Internet@Schools, 20*(3), 12.


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